

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings of claims:

Listing of Claims:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Previously Presented) The method of claim 35, further comprising accepting one of the plurality of navigation connectors at the navigation service by receiving a registration request from the one of the navigation connectors, receipt of the registration request resulting in the navigation service having an identifier for the one of the navigation connectors, and receiving the navigation information by receiving the navigation nodes; from the one of the navigation connectors, as defined by the navigation object model, the received navigation nodes including the connector identifier.
5. (Previously presented) The method of claim 4, further comprising selecting the one of the plurality of navigation connectors to contact based on one of the connector identifiers.
6. (Previously Presented) The method of claim 35, further comprising providing a unified navigation area by displaying a navigation window in a portal presentation, the navigation window including navigation links to resources of the different application sources, the navigation links being organized according to the united navigation hierarchy.
7. (Previously Presented) The method of claim 35, further comprising:

receiving a navigation action; and
changing at least one of the navigation nodes in accordance with the received navigation action.

8. (Previously Presented) The method of claim 35, wherein uniting the navigation hierarchies further comprises merging at least two navigation objects from the different application sources based on a merge identifier.

9. (Original) The method of claim 8, wherein the united navigation hierarchy comprises a graph of linking relationships among navigation objects.

10. (Previously Presented) The method of claim 35, wherein uniting the navigation hierarchies further comprises dynamically loading the united navigation hierarchy.

11. (Canceled)

12. (Canceled)

13. (Previously Presented) The portal system of claim 34, wherein the navigation connectors include connector identifiers that are included in the navigation nodes to provide the navigation information.

14. (Previously Presented) The portal system of claim 34, wherein the navigation connectors generate the navigation nodes according to the navigation object model to provide the navigation information, the navigation nodes including at least one merge identifier that indicates similar content in two navigation nodes from different application sources and that results in a merger of the two navigation nodes.

15. (Previously Presented) The portal system of claim 34, wherein the navigation nodes include a linking relationship to other nodes that are not in a parent child relationship in the homogeneous view of the navigation information.

16. (Previously Presented) The portal system of claim 34, wherein the navigation service module is configured to read data from the different application sources using the navigation connectors but not to write data to the different application sources using the navigation connectors.

17. (Previously Presented) The portal system of claim 34, wherein the navigation service module dynamically loads a united navigation hierarchy when providing the homogeneous view of the navigation information.

18. (Original) The portal system of claim 17, wherein a role editor allows setting a node as a new root of the united navigation hierarchy for display for users that belong to a role.

19. (Canceled)

20. (Canceled)

21. (Previously Presented) The portal system of claim 34, wherein the navigation service module further comprises INavigationService means for abstracting navigation operations, the connector interface comprises INavigationConnector means for plugging an application into the INavigationService means, and the navigation data interface comprises INavigationNode means for accessing navigation information from the different application sources.

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Previously Presented) The article of claim 36, further comprising accepting one of the plurality of navigation connectors at the navigation service by receiving a registration request from a the one of the navigation connectors, receipt of the registration request resulting in the navigation service having an identifier for the one of the navigation connectors, and receiving the navigation information by receiving the navigation nodes from the one of the navigation connectors, as defined by the navigation object model, the received navigation nodes including the connector identifier.

26. (Previously Presented) The article of claim 25, wherein the operations further comprise selecting the one of the plurality of navigation connectors to contact based on one of the a connector identifiers.

27. (Previously presented) The article of claim 36, further comprising providing a unified navigation area by displaying a navigation window in a portal presentation, the navigation window including navigation links to resources of the different application sources, the navigation links being organized according to the united navigation hierarchy.

28. (Previously presented) The article of claim 36, wherein the operations further comprise:

receiving a navigation action; and

changing at least one of the navigation nodes in accordance with the received navigation action.

29. (Previously presented) The article of claim 36, wherein uniting the navigation hierarchies further comprises merging at least two navigation objects from the different application sources based on a merge identifier.

30. (Original) The article of claim 29, wherein the united navigation hierarchy comprises a graph of linking relationships among navigation objects.

31. (Previously presented) The article of claim 36, wherein uniting the navigation hierarchies further comprises dynamically loading the united navigation hierarchy.

32. (Canceled)

33. (Canceled)

34. (Currently Amended) A portal system comprising:
an integration layer comprising a navigation service module residing on a first programmable machine, the navigation service module defining a connector interface and;
a data layer comprising a plurality of application sources, each of the application sources creating an application-specific hierarchy, the plurality of application sources residing on one or more additional programmable machines that communicate over a network with the navigation service module on the first programmable machine, and an equal number of navigation connectors to the navigation service, each one of the plurality of application sources providing one of the navigation connectors by implementing the defined connector interface on the one or more additional programmable machines and by generating one or more navigation nodes that represent data objects in the each one of the plurality of application sources; and

a presentation layer that resides on the first programmable machine and that comprises one or more navigation applications that obtain navigation information from the navigation service module, the navigation service module uniting the navigation nodes provided by the plurality of navigation connectors to provide a homogeneous view of navigation information from the plurality of application sources by uniting the application-specific navigation hierarchies from each of the plurality of application sources into a unified, consistent application hierarchy that is presented to one or more clients running on one or more client machines.

35. (Previously Presented) A method comprising:

operating one or more navigation applications residing on a first programmable machine in a presentation layer of a navigation model architecture, a navigation service module residing on the first programmable machine in an integration layer of the navigation model architecture, and a plurality of application sources residing on one or more additional programmable machines in a data layer of the navigation model architecture, the one or more additional programmable machines communicating over a network with the navigation service module on the first programmable machine, each of the application sources creating an application-specific hierarchy;

implementing a connector interface on the one or more additional programmable machines, the connector interface being defined by the navigation service module and causing on each of the plurality of application sources to provide one navigation connector to the navigation service for each of the plurality of application sources, each navigation connector providing one or more navigation nodes that represent data objects in the one of the plurality of application sources that provides the navigation connector; and

uniting the navigation nodes to provide, via the one or more navigation applications, a homogeneous view of navigation information from the plurality of application sources by uniting

the application-specific navigation hierarchies from each of the plurality of application sources into a unified, consistent application hierarchy.

36. (Previously Presented) An article comprising a machine-readable medium storing instructions operable to cause one or more machines to perform operations comprising:

operating one or more navigation applications residing on a first programmable machine in a presentation layer of a navigation model architecture, a navigation service module residing on the first programmable machine in an integration layer of the navigation model architecture, and a plurality of application sources residing on one or more additional programmable machines in a data layer of the navigation model architecture, the one or more additional programmable machines communicating over a network with the navigation service module on the first programmable machine, each of the application sources creating an application-specific hierarchy;

implementing a connector interface on the one or more additional programmable machines, the connector interface being defined by the navigation service module and causing on each of the plurality of application sources to provide one navigation connector to the navigation service for each of the plurality of application sources, each navigation connector providing one or more navigation nodes that represent data objects in the one of the plurality of application sources that provides the navigation connector; and

uniting the navigation nodes to provide, via the one or more navigation applications, a homogeneous view of navigation information from the plurality of application sources by uniting the application-specific navigation hierarchies from each of the plurality of application sources into a unified, consistent application hierarchy by merging two or more of the navigation nodes from two or more of the application sources that are related to a same issue.

37. (Previously Presented) The portal system of claim 34, wherein one or more of the plurality of application sources are chosen from a group consisting of Web services, an enterprise base system, a human resource management system, a customer relationship management system, a financial management system, a knowledge management system, a business warehouse system, a time management system, and an electronic file or mail system.

38. (Previously Presented) The method of claim 35, wherein one or more of the plurality of application sources are chosen from a group consisting of Web services, an enterprise base system, a human resource management system, a customer relationship management system, a financial management system, a knowledge management system, a business warehouse system, a time management system, and an electronic file or mail system.

39. (Previously Presented) The article of claim 36, wherein one or more of the plurality of application sources are chosen from a group consisting of Web services, an enterprise base system, a human resource management system, a customer relationship management system, a financial management system, a knowledge management system, a business warehouse system, a time management system, and an electronic file or mail system.